

U.S. Department of Transportation  
Research and Special Programs Administration (RSPA)  
Office of Contracts and Procurement, DMA-30  
400 7<sup>th</sup> Street, SW, Room 7104  
Washington, DC 20590

DOT Center Climate Change and Environmental Forecasting - Climate Change and Transportation Research

DTRS56-04-BAA-0001, due November 30, 2003, Primary POC Warren D. Osterberg, Contracting Officer, Phone: 202-366-6942, Fax 202-366-7974, Email: [warren.osterberg@rspa.dot.gov](mailto:warren.osterberg@rspa.dot.gov). Backup POC is Mr. Noman Ansari, Contracts Specialist, telephone (202) 366-5513; e-mail [noman.ansari@rspa.dot.gov](mailto:noman.ansari@rspa.dot.gov).

CONTRACT INFORMATION: Through this Broad Agency Announcement (BAA), the U.S. Department of Transportation (DOT), Research and Special Programs Administration (RSPA) is soliciting information and descriptions (white papers) for Climate Change and air quality issues. The White Papers are to address strategies to improve the energy efficiency of transportation, lower greenhouse gas emissions in the transportation sector, or reduce the impacts of climate change on transportation. White papers are not to exceed six pages plus a title page and must include the offeror's contact information: point of contact, telephone number, fax number and email address. Separate white papers must be submitted for each proposed project and multiple projects cannot be combined into a single white paper.

SPECIAL NOTE: White papers (first phase proposals) should be submitted on or before November 30, 2003. The Government expects to complete its review of the white papers and provide feedback to the respondents by January 31, 2004 unless otherwise amended. Those respondents selected for the second round of proposal development should submit eight (8) copies of each proposal within one month of the date of notification.

SCOPE: The transportation sector accounts for about one third of U.S. carbon dioxide emissions and one quarter of U.S. greenhouse gas (GHG) emissions. Climate change and variability associated with these emissions may also impact the Nation's transportation system. Much of DOT's research to deal with climate change is managed through the DOT Center for Climate Change. Created in 1999, the Center is a partnership of eight DOT operating administrations (Federal Aviation Administration, Federal Highway Administration, Federal Railroad Administration, Federal Transit Administration, Maritime Administration, National Highway Traffic Safety Administration, and Research and Special Programs Administration and the Bureau of Transportation Statistics) and the Office of the Secretary of Transportation. Through strategic research, policy analysis, partnerships, and outreach, the Center promotes comprehensive and multimodal approaches to reduce transportation-related greenhouse gases and to mitigate the effects of global climate change on the transportation network. Additional information regarding DOT's Center for Climate Change can be found at <http://climate.volpe.dot.gov/>.

## **Objectives**

The purposes of this BAA are to:

- promote research on climate change and transportation in the areas described in this notice,

- establish new linkages within the transportation community on climate change issues, and
- foster successful research partnerships.

The research will support the U.S. DOT in understanding and addressing transportation-related GHG emissions, examine innovation in the transportation planning and decision-making processes pertinent to climate change matters, and/or improve knowledge of the impacts of climate change on the transportation sector. The funding is intended to support research or policy evaluation but not technology development, per se. However, technology development is an important aspect of transportation and climate change and may be a necessary basis for research analysis. Many policy issues are relevant to multiple modes, and proposals should take this into account. Partnering with other organizations (including internationally focused or based entities) and cost sharing with the Center are encouraged but not required.

### **Transportation-Climate Change Research Topic Areas**

The DOT Center for Climate Change is interested in funding projects relating to the following three topic areas. The specific research issues described under each area are examples only. Other research ideas are encouraged.

#### **Impact of Climate Variability and Change on Transportation**

This research will examine the potential effects of climate variability and climate change on transportation infrastructure and services and will identify potential adaptation and mitigation strategies for use by transportation decision makers, infrastructure builders and operators, and state and local planners.

Examples of research issues:

- Conduct of regional climate sensitivity analysis for the transportation sector.
- Synthesis of existing risk assessment data specific to transportation infrastructure and operations.
- Identification of data and analysis gaps for future research.
- Assessment of existing transportation planning tools and their ability to appropriately incorporate climate change data.
- Identification of challenges to marine and inland waterway transportation from changes in precipitation patterns or sea level rise.

#### **Increasing Energy Efficiency and Reducing Greenhouse Gas Emissions**

This research will examine opportunities for mitigating the GHG impact of the transportation sector. Projects may consider the potential for conservation through more efficient transportation practices or through new or emerging technologies, the substitution of non-fossil fuels, or other methods. Research may pertain to any aspect of reducing the sector's GHG emissions, from increasing consumer acceptance of new technologies to overcoming challenges in technology deployment.

Examples of research issues:

- Examination of economic, social, and institutional factors in transportation energy consumption.
- Identification of options for improving the freight system's efficiency.
- Identification of transportation "best practices" that reduce GHG emissions.

- Assessment of potential alternative fuels (including diesel) for light or heavy-duty vehicles and the challenges they pose.
- Assessment of improving incentives to increase operational efficiency.
- Identification of challenges to the introduction of advanced vehicle technologies, such as fuel cells.

#### Decision making Tools and Their Applications and Modeling

This research will focus on developing and improving analytical tools that could support transportation decision making at all levels of government and in the private sector. Modeling work may involve fiscal instruments and other market mechanisms, vehicle and fuel characteristics, transportation system design and operation, or other research areas. Energy models currently in use for decision making, such as the Department of Energy's National Energy Modeling System (NEMS), represent some important aspects of the transportation sector (e.g. consumer demand and off-highway surface modes); however, they do so at a macro level and operate primarily at the national scale. Research in this area should provide a better basis for evaluating a broad range of multimodal transportation-related options at different geographic scales.

Examples of research issues:

- Examination of the rate of deployment for alternative fuel infrastructure.
- Development of tools needed to supplement existing tools and processes.
- Improvement of consumer demand reduction and mode selection models to support metropolitan transportation planning.
- Development of consumer-based models needed to better predict future fleet mixes.
- Modeling of incentive policies to speed the introduction of new, efficient power trains for locomotives, trucks, vessels, or any other vehicles.
- Improvement of availability of GHG emissions data by mode through modeling or other techniques.
- Development of models and methodologies for estimating societal costs and benefits of transportation technologies or policies.

**WHITE PAPERS:** All products submitted under this program become the property of U.S. DOT and may be disseminated or used for government purposes subsequent to the completion of the work. The developer of the material also will have continued incidental use of the products for the purpose of additional research or marketing but may not sell or offer the products without prior approval of U.S. DOT.

All products submitted under this program need to meet the U.S. DOT requirements for published and electronic formats, including Section 508 compliance for all web-based products. Typical formats for electronic deliverables include MS Word, Excel, Access, PowerPoint, Adobe Acrobat PDF and HTML files.

Proposals should demonstrate professional-level competencies at layout, design, editing and proofreading for both print publication and for posting on an Internet web site. Prior experience working with Federal Government Printing Office (GPO) standards and Federal Internet web sites will be helpful but is not required.

The Government will select projects through a two-phase process of proposal submission, review, and acceptance. In Phase 1, organizations are invited to submit white papers. The Government will review and comment on the white papers. Based on this review, respondents selected by the Government will then be asked to in Phase 2 to prepare full proposals based on the white papers.

Phase 1: White Papers, of no more than six pages plus a title page, should include:

1. The full name, mailing address, point of contact, a telephone number, fax number and an electronic mail address for the organization.
2. The research topic area(s) of the proposal.
3. A general cost proposal including the total amount of funding requested from U.S. DOT, as well as other sources of funds if any.
4. A short description of proposed work, including the research approach, deliverables, and period of performance (maximum, two years) with timeline for the work.
5. Short biographies of the individual(s) who will be performing the research.
6. Demonstration of successful and timely completion of past work in the area of the proposal (may include references to readily accessible documents).

Phase 2: Full Proposals, of no more than 20 pages plus a title page, shall include:

1. Objective of the proposed work and a summary of the work to be done. These should be brief and fully supported by the detailed proposal.
2. List of participant organizations with the name, telephone and e-mail for the point of contact at each organization. Identify the lead organization.
3. Other detailed information on the proposed project, such as:
  - a. *Background*: This may include information on the state of the research and the longer term goals of the organization.
  - b. *Importance of the proposed research*
  - c. *Any plans for future work in the proposed research area.*
4. Statement of work consisting of a list of numbered tasks and milestones with descriptions, and expected completion date(s).
5. Schedule chart showing the timing of all tasks listed in the statement of work.
6. Costs, including the sources (federal, cost sharing, in-kind, etc.) of funding for each task and a detailed explanation of the proposed costs, e.g. direct labor, indirect costs, other direct costs, etc.

## **Evaluation Criteria**

The principal bases for selecting proposals will be funding availability and the value of the proposal to the Center's research agenda, as measured by the criteria below. Project cost sharing is encouraged but not required.

### **A. Technical Merit of the Proposed Research**

The technical merit of the proposed research, including the completeness, adequacy, relevance, uniqueness, and innovativeness of the proposed research plan and relevance of the proposed research to the Center's research objectives.

### **B. Understanding of the Issues**

Demonstrated understanding of transportation-related climate change/variability issues

within the context of the research proposal.

C. Organization's Qualifications to Perform Research

- 1) Demonstration of the necessary staff to complete the proposed work, including qualifications of the Principal Investigator and other members of the research team;
- 2) Demonstration of successful completion of similar projects;
- 3) Ability to communicate research results;
- 4) Technical management capabilities; and
- 5) Availability of resources, facilities, and equipment.

D. Impact of the Research

The value of the research to the transportation community, including its applicability across various modes of transportation.

All evaluation factors are of equal importance.

GENERAL INFORMATION: This BAA can be downloaded via the Internet at:

<http://www.rspa.dot.gov> under Procurement Opportunities. In all correspondence to the RSPA Office of Contracts and Procurement, please reference the BAA No. DTRS56-04-BAA-0001. Early submission of white papers responding to this BAA is strongly encouraged. All white papers must be submitted via overnight mail (e.g., Federal Express, UPS) to Warren Osterberg, Research and Special Programs Administration, ATTN: DMA-30, 400 Seventh Street SW, Room 7104, Washington, D.C., 20590. Because of continued mail security concerns, do not send white papers via regular mail. Please submit ten (10) copies of each white paper. White papers must be received by the above office no later than November 30, 2003, at 4:00 PM, EST.

NOTE: All inquiries concerning this announcement shall be directed to the RSPA Office of Contracts and Procurement, ATTN: Mr. Warren D. Osterberg, Contracting Officer, telephone: (202) 366-6942; e-mail: [warren.osterberg@rspa.dot.gov](mailto:warren.osterberg@rspa.dot.gov) or Mr. Noman Ansari, Contracts Specialist, telephone (202) 366-5513; e-mail [noman.ansari@rspa.dot.gov](mailto:noman.ansari@rspa.dot.gov). For further information about the DOT Center for Climate Change research program, please contact: Kirsten Oldenburg ([kirsten.oldenburg@bts.gov](mailto:kirsten.oldenburg@bts.gov)).

BROAD AGENCY ANNOUNCEMENT: This FedBizOps notice, in conjunction with further announcement details available from the RSPA procurement site Internet address identified above, constitutes the BAA as contemplated by FAR 6.102(d)(2). A formal Request for Proposals (RFP) for other type of solicitation regarding this announcement will not be issued. The funding will be allocated by DOT's Center for Climate Change and environmental Forecasting (the Center) through a two-phased competitive process described in this notice. U.S. DOT anticipates funding no more than \$355,000 to three to six projects for this fiscal year but reserves the right to select any, all, or none of the proposals submitted. The award vehicle will be either a purchase order (if the value of the project is under \$100,000) or a contract (if the value of the project is over \$100,000). A technical evaluation panel will review all white papers received for responsiveness to the evaluation areas stated in this BAA. Offerors providing white papers deemed worthy of further consideration and meeting the criteria of this BAA will be notified with possible suggestions for change in scope and detailed guidelines for submitting full proposals. No discussions will be held between an offeror and the Government's technical staff after submission of a white paper without the Contracting Officer's prior approval. It is DOT/RSPA's desire to encourage the widest participation, particularly the involvement with

universities and other academic institutions, as well as with individuals, corporations, non-profit organizations, small and small disadvantaged businesses, and State or local governments or other entities.